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REMARKS

As a preliminary matter, Applicants thank the Examiner for the courtesy shown to Applicants' representatives, Patrick G. Burns and Josh C. Snider, in the personal interview conducted with both representatives and the Examiner on May 15, 2007. All of the pending independent claims were discussed with respect to the Ohkubo (US 4,878,742) and Suzuki (US 5,905,556) references cited in this case, as well as with respect to the Song reference (US 6,684,524) that is cited in the related continuation Application Serial No. 11/390,727. Although agreement was not reached as to the patentability of all of the claims in their present form, the interview successfully narrowed several of the remaining issues.

Specifically, with respect to independent claim 38 (and its dependent claim 39), the Examiner indicated that, although the amendments from Amendment E (filed April 23, 2007) may be sufficient to overcome the existing rejections, he has found new prior art references that he considers to broadly read upon the substrate featured in claim 38. Without additional apparatus-related limitations, such as those that appear in the other claims the Examiner has already determined to be allowable, the Examiner will broadly consider claim 38 to be anticipated by any prior art substrate that exhibits the same general appearance as what was claimed, regardless of the functionality of such prior art substrates.

Accordingly, claim 38 has been amended herein along the lines generally suggested by the Examiner. Specifically, claim 38 is now more clearly drawn toward a liquid crystal display apparatus that includes a substrate, as opposed to the substrate itself. The claim now further features a layer of liquid crystal molecules, and also the ability of the previously featured linear slit and boundary to control the planar rotation of individual liquid

crystal molecules. The Examiner agreed that even a newly found reference (US Patent No. 5,646,705 was discussed, although not yet cited of record) does not show such rotational control by the shapes of any "slit" or "boundary." The Examiner should see that the amendments herein are consistent with the amendment made to claim 42 in Amendment E.

The rotational control features of the present claims were further discussed with respect to copending Application Serial No. 09/097,027 (now Patent No. 6,724,452) and its own family of several related divisional and continuation cases. This copending case features similar alignment control features, but alternatively describes the rotational component of the liquid crystal molecules as "azimuth orientation." Applicants' representatives demonstrated to the Examiner how rejections in the copending case based on various combinations of prior art references to Koma (US 5,608,556), Hirata (US 5,953,093), and Hisatake (US 5,434,690) were successfully overcome by defining the claim language to avoid any confusion between control of the rotational azimuth orientation, as opposed to control of the tilt. Agreement was reached that the boundary limitations in the present claims are sufficient to avoid any potential obviousness-type double patenting rejections in the present case base on the copending case.

With respect to the Song reference cited in the related continuation case, enclosed herewith is a certified English-language translation of Japanese priority Application No. 10-264849, originally filed in Japan on September 18, 1998. Applicants submit that all of the pending claims in this case have full written description and enablement support in the priority document, and therefore priority has been perfected in this case. The perfected priority of the present Application thus is now earlier than the earliest US priority date of

Song, namely, May 14, 2007. Song should therefore not be properly considered as prior art against this Application.

With respect to recently amended claim 42 (and its dependent claims), agreement was generally reached that neither Ohkubo nor Suzuki teach or suggest lincarly arranged protrusions or slits whose shapes control rotation in the plane of the substrates of the liquid crystal molecules. Ohkubo shows only tilt control in a direction perpendicular to the substrates, and no planar rotational control. Suzuki indicates rotational control, but not that the shapes of linearly arranged protrusions or slits affect this control. In fact, Suzuki shows several different embodiments for the shapes of its two main electrodes (the Examiner interprets the space formed between the electrodes to form a "slit"), but the rotation of liquid crystal molecules near the electrodes appears to be unaffected by any change in the shape of the electrodes. Before a final determination regarding the patentability of these claims is made though, the Examiner indicated that he intends to perform another prior art search based on the issues discussed in the interview and the recent claim amendments.

For all of the foregoing reasons, Applicants submit that the present Application, including claims 38-54, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if a further interview would expedite prosecution.

Respectfully submitted,

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